



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/021,138

12/12/2001

Gary W. Reed

7165-US0

2475

7590

10/06/2003

WILLIAM K. BUCHER
TEKTRONIX, INC.
14150 S.W. KARL BRAUN DRIVE
P.O. BOX 500 (50-LAW)
BEAVERTON, OR 97077-0001

EXAMINER

TANG, MINH NHUT

ART UNIT

PAPER NUMBER

2829

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/021,138

Applicant(s)

REED ET AL.

Examiner

Minh N. Tang

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 12-31, 35-47 and 51-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 15, 17, 20, 22-31, 35-47 and 51-61 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 12-14, 16, 18, 19 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/09/2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6, 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of species of Fig. 4 in Paper No. 9 is acknowledged.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

It is noted that claims 9-11, 32-34, and 48-50 have been canceled by Applicants.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 12/12/01 (Paper No. 6) and on 6/10/02 (Paper No. 7) are considered by the examiner.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "notches 158" (see Applicants' specification page 16, line 5). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: on page 16, lines 2, and 3, "circuit board 32, 26" and "housing 50" should be -- circuit board 32, 36 -- , and -- housing 30 --, respectively.

Appropriate correction is required.

Art Unit: 2829

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

6. Claims 1-4, 23-24, 26, 28, 30, 42-43, 45-46, 58, 60, and 61 are objected to because of the following informalities:

a/ in claim 1, lines 8-9, "the open end the housing" should be -- the open end of the housing --.

b/ in claims 2, and 28, line 3, "the input signal pads", and "the substrate" should be -- the input signal pads of the second substrate --, and -- the second substrate --, respectively.

c/ in claims 3, 4, and 30, line 5, "the substrate" should be -- the first substrate --.

d/ in claims 23, and 42, "the substrate" (both in lines 3 and 4), and "substrate" (line 7) should be -- the first substrate --.

e/ in claims 24, 43, and 58, both terms "the substrate" (claim 24, lines 3 and 4; claims 43 and 58, line 4) should be -- the first substrate --.

f/ in claims 26, and 45, "the input signal pads" (line 3), "the substrate" (lines 3 and 5), and "the signal pads" (line 5) should be -- the input signal pads of the second substrate --, -- the second substrate --, and -- the input signal pads --, respectively.

Art Unit: 2829

g/ in claim 46, "the substrate" (lines 10 (two terms), 13, 17, and 24), "the carrier" (line 11), and "the cover" (line 14) should be -- the first substrate --, -- the substrate carrier --, and -- the substrate carrier cover --, respectively.

h/ in claims 60, and 61, "the input signal pads" (lines 3, and 5), "the substrate" (lines 4, and 6), "the input signal circuits" (line 4), and "the signal pads" (line 7) should be -- the input signal pads of the second substrate --, -- the second substrate --, the input signal circuits of the second substrate --, and -- the input signal pads --, respectively.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 15, 17, 20, 22, 27-31, 35-47, and 51-61 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 15, 20, 38, 41, 54, and 57, the limitation "the first bore" (lines 3 and 4) has not been recited previously; therefore this term is indefinite.

In claims 17, 22, 54, and 57, it is not clear "the latching members" referred to which "latching members" (i.e., to "the flanges include latching members" recited in claims 16, 21, 53, 56, respectively, or to "the removable signal contact holder further comprises a planar frame member and latching members" recited in claims 4, 46, respectively).

Art Unit: 2829

In claim 27, the limitation "a probe head retention member having bores formed through the housing" is unclear and inaccurate since it appears that the bores of the probe head retention member could not form through the housing.

In claim 46, the limitation "a probe head retention member having bores formed through the substrate carrier" is unclear and inaccurate since it appears that the bores of the probe head retention member could not form through the substrate carrier.

Claims 28-31, 35-37, 39-40, 42-45, 47, and 51-61 are rejected since they depend on rejected base claims.

In light of the uncertain language found in the claims, no art has been applied for claims 27-31, 35-47, and 51-61. Therefore, the claims are not necessarily allowable over prior art until applicants clarify the meaning of the claims' limitations.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-6, and 23-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Daly et al. (U.S.P. 5,007,858).

As to claim 1, Daly et al. disclose, in Figs. 1-4, a multi-channel, low input capacitance signal probe head (10) comprising: at least a first substrate (16 in Fig. 2 or left 16 in Figs. 3-4) having a plurality of input signal pads (96, 98, Fig. 2) formed thereon with the input signal pads (96, 98) being exposed on one end of the substrate (16); a

Art Unit: 2829

housing (50, Fig. 2) having at least a first open end (64) and a substrate support member (52) that receives the substrate (16) such that the input signal pads (96, 98) are exposed at the open end (64) of the housing (50); and a removable signal contact holder (120, Figs. 1) mounted to the housing (50) and supporting electrically conductive elastomer signal contacts (196, 198 in Figs. 3-4) with the holder (120) disposed over the open end (64) of the housing (50) such that the elastomer signal contacts (196, 198) engage the input signal pads (96, 98).

As to claim 2, Daly et al. disclose in Fig.2, a second substrate (18) having a plurality of input signal pads (96, 98) formed thereon with the input signal pads (96, 98) of the second substrate (18) being exposed on one end of the second substrate (18) with the substrate support member (52) receiving the second substrate (18) such that the support member (52) is disposed between the first and second substrate (16, 18) and the input signal pads (96, 98) on the second substrate (18) are exposed at the open end (64) of the housing (50).

As to claim 3, Daly et al. disclose in Fig. 2, the housing (50) further comprises opposing sidewalls walls (i.e., horizontal walls) separated by opposing front and back walls (i.e., walls perpendicular to horizontal walls) with each sidewall having a latching recess (see Fig. 2) formed therein adjacent to the open end (64) of the housing (50), and bores (60) formed through the housing (50) on either side of the first substrate (16) that are perpendicular to the open end (64) of the housing (50).

As to claim 4, Daly et al. disclose in Figs. 3-4, the removable signal contact holder (120) further comprises a planar frame member (154) and latching members

Art Unit: 2829

(164) extending perpendicular from either end of the frame member (154) with at least a first slot (i.e., cavity for inserting the elastomer signal contacts 196, 198) formed in the frame member (154) aligned with the input signal pads (96, 98) on the first substrate (right 16) for receiving the electrically conductive elastomer signal contacts (196, 198).

As to claim 5, Daly et al. disclose in Figs. 3-4, the latching members (164) further comprise inwardly facing latching ramps (see Figs. 3-4) with each latching ramp having a terminating ledge that engage the latching recesses in the housing sidewalls.

As to claim 6, Daly et al. disclose in Figs. 3-4, at least a first alignment rib (part of latching members 164) formed parallel to the slot on the planar frame (154) that engages a corresponding recess formed in the housing (50).

As to claim 23, Daly et al. disclose in Fig. 2, the housing (50) further comprising a substrate carrier (also called 52) forming the substrate support member (52) that receives the first substrate (16) with the input signal pads (96, 98) on the first substrate (16) being exposed at one end of the carrier (52); and a substrate carrier cover (54) having exterior walls forming an interior chamber (see Fig. 2) that receives the substrate carrier (52) and the first substrate (16) with the exterior walls forming the opposing sidewalls and front and back walls of the housing (50).

As to claim 24, Daly et al. disclose in Fig. 2, the substrate carrier (52) further comprises opposing stiles and rails (see Fig. 2) with the stiles and at least one rail having recesses formed on one surface thereof for receiving the first substrate (16) with the end of the first substrate (16) having the signal pads (96, 98) extending to the end of the rail having the recess.

Art Unit: 2829

As to claim 25, Daly et al. disclose in Fig. 2, the stiles include the housing bores (60).

As to claim 26, Daly et al. disclose in Fig. 2, a second substrate (18) having a plurality of input signal pads (96, 98) thereon with the input signal pads (96, 98) of the second substrate (18) being exposed on one end of the second substrate (18) with the stiles and the one rail having recesses formed on the reverse side thereof for receiving the second substrate (18) with the end of the second substrate (18) having the input signal pads (96, 98) extending to the end of the rail having the recess.

Allowable Subject Matter

11. Claims 7-8, 12-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and overcome the objections/rejections under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Claims 7-8, and 12-22 recite, inter alia, wherein the frame member further comprises apertures formed on either side of the slot and aligned with the bores in the housing.

The art of record does not disclose the above limitations, nor would it be obvious to modify the art of record so as to include the above limitations.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

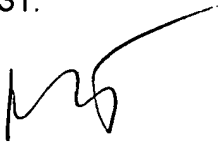
Art Unit: 2829

Reed et al.	6,447,339	Adapter For A Multi-Channel Signal Probe.
Kuo et al.	6,343,957	Electrical Adapter.
Reed et al.	5,915,987	Latched Electrical Connector.
Massey et al.	5,119,020	Electrical Cable Assembly For A Signal Measuring Instrument And Method.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh N. Tang whose telephone number is (703) 305-1652. The examiner can normally be reached on M-F (6:30-4:00) first Fri. Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mrs. Cuneo, Kamand can be reached on (703) 308-1233. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.



Minh Tang
September 09, 2003